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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/022,108	12/13/2001	Georg G. A. Bohm	P01012US1A	2477

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EXAMINER

MAKI, STEVEN D

ART UNIT

PAPER NUMBER

1733

DATE MAILED: 04/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/022,108	<b>Applicant(s)</b> BOHM ET AL.	
	<b>Examiner</b> Steven D. Maki	<b>Art Unit</b> 1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 December 2004 and 25 January 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 and 20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 and 20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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1) Applicant is advised that should claim 1 be found allowable, claim 20 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim 20 has the same scope as claim 1. The different wording of the preambles of claims 1 and 20 fails to create a difference in scope between these claims.

2) The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3) Claim 20 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 20, it is unclear if the description of "isolating ... from the solvent [which has no antecedent basis]" means that claim 20 excludes the use of latex which is described in the step of "providing a rubber cement or latex". In other words, it is unclear if "solvent" is considered to be generic to organic solvent and water. More generally, it is unclear if either the cement or latex may be used in the isolating step to form the premix.

4) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6) **Claims 1, 7 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Japan 486 (JP 52-145486).**

Japan 486, directed to producing powder rubber, teaches:

(1) mixing rubber latex (e.g. butadiene, butadiene-styrene), carbon black and optionally oil such as aroma oil, naphthene oil or paraffin oil (the oil being a "processing aid");

(2) adding salt coagulating agents to the mixture to form crumb (the step of forming crumb being an "isolating step"); and

(3) adding rubber latexes and carbon black aqueous slurry to the crumb such that the amount of carbon black added exceeds that of the carbon black added in the first step, and

(4) treating the mixture obtained in the third step in the presence of salt coagulating agents.

Hence, Japan 486 teaches a first "liquid state" mixing step in which rubber latex is mixed with oil ("processing agent") to form a mixture from which crumb is obtained

and a second "liquid state" mixing step in which the crumb is mixed with rubber latex and aqueous carbon black slurry.

In claims 1 and 20, the claimed adding step reads on Japan 486's first mixing step. The claimed "processing aid" reads on the oil. The claimed isolating step reads on Japan 486's step of forming crumb from the first mixture. The claimed step of "mixing the premix with carbon black" reads on Japan 486's step of adding rubber latex and aqueous carbon black slurry to the crumb. The claimed step of "mixing the premix with carbon black" reads on and does not exclude "liquid state" mixing. In other words, the step of "mixing the premix with carbon black" fails to require "solid state mixing".

**7) Claims 1, 7-11, 17-18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 486 and optionally in view of Willi Clas (US 3317458).**

Japan 486, discussed above is considered to anticipate claims 1, 7 and 20. In any event: It would have been obvious to one of ordinary skill in the art to add "at least one processing aid" to the rubber latex in Japan 486's first mixing step before coagulating to form the crumb and then mixing the crumb with rubber latex and aqueous carbon black since (1) Japan 486 teaches that oil may be added to the rubber latex in the first mixing step and optionally (2) Willi Clas, also directed to making a premixture, teaches that known plasticizers such as mineral oil, resins, fats or waxes can be incorporated in the preliminary mixtures before the coagulation of the latex in order to improve processing of the composition! (col. 2 lines 23-30).

As to claim 8, it would have been obvious to mix within a mixer having a net mixing chamber volume of at least 75 L operated at a fill factor of at least about 50

depending on the desired amount of rubber powder to be made since (1) Japan 486 teaches using mixing steps in the manufacture of the rubber powder and optionally (2) it is taken as well known / conventional per se to conduct mixing in a mixer of desired size.

As to claim 9, Willi Clas suggests using resin as a processing aid.

As to claims 10-11, it would have been obvious to use fatty acid (claim 10) / mixture of zinc fatty acid salts (claim 11) for the processing aid since (1) Willi Clas teaches using processing aids such as fats and (2) each of fatty acid and mixture of zinc fatty acid salts is taken as a well known / conventional processing aid per se in the rubber compounding art.

As to claims 17-18, the claimed amount of processing agent would have been obvious and could have been determined without undue experimentation in view of (a) Japan 486's teaching to add oil to the latex and optionally (b) Willi Clas's suggestion to add a processing aid (col. 2 lines 23-30) to a latex to improve processing of the composition.

**8) Claims 2-7 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 486 and optionally in view of Willi Clas as applied above and further in view of Baranwal (US 3824206).**

As to claims 2-6, it would have been obvious to one of ordinary skill in the art to add solvent to the processing aid to form a cocktail as claimed in view of Baranwal et al's teaching to facilitate dispersion of an additive in the water or solvent in which the rubber is dispersed by dispersing the additive in a small volume of water or solvent as is

conventional in making up such mixes (col. 5 lines 34-38). As to heating (claim 3), it would have been obvious to heat the cocktail as claimed since it is taken as well known / conventional per se to improve dispersion in a liquid mixture using heat. As to claims 4-6, it would have been obvious to use a processing aid and oil in view of (1) Japan 486 and Baranwal's suggestion to oil and (2) it is taken as well known / conventional per se in the art of rubber compounding to use both oil and a different processing aid such as a different oil.

As to claim 7, it would have been obvious to isolate by drying the rubber and processing aid since (1) Japan 486 teaches isolating by coagulation to from the crumb and (2) it is well known, as evidenced by Baranwal et al (see col. 2 lines 7-26), to mix rubber in liquid form as a latex or a solution with oil and then to isolate the "premix" by coagulation if it is a latex or by evaporation if it is a solvent.

As to claim 16, it would have been obvious to shape and cure in the vulcanizable composition into a tire component such as a tire tread in view of Baranwal et al's suggestion to shape and cure a vulcanizable composition containing carbon black to form a tire tread.

**9) Claims 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 486 and optionally in view of Willi Clas as applied above and further in view of Lawson et al (US 5332810).**

As to claims 12-15, it would have been obvious to use the claimed functionalized rubber as the rubber in Japan 486's process in view of Lawson et al's teaching of a

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functionalized rubber having a predictable molecular weight range for mixing with carbon black.

Remarks

10) Applicant's arguments with respect to claims 1-18 and 20 have been considered but are moot in view of the new ground(s) of rejection.

Applicant comments that the current claims define mixing certain ingredients in the liquid state followed by mixing certain ingredients in the solid state. However, none of the current claims require mixing ingredients in the liquid state followed by mixing ingredients in the solid state.

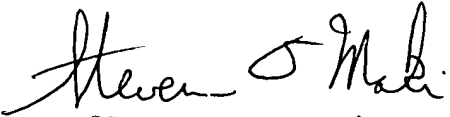
11) No claim is allowed.

12) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on (571) 272-1156. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Steven D. Maki  
April 18, 2005

  
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4-18-05